

## QUESTIONS AND ANSWERS

### TABLE OF QUESTIONS

|   |          |
|---|----------|
| <b>I. Frequently Asked Questions:</b>   | <b>1</b> |
| Q1. If I have questions about this funding announcement, who do I contact?  | 1        |
| Q2. How will I receive a response to questions submitted to <a href="mailto:arpa-e-co@hq.doe.gov">arpa-e-co@hq.doe.gov</a> about this FOA?  | 1        |
| Q3. Will ARPA-E post a response to every question submitted to <a href="mailto:arpa-e-co@hq.doe.gov">arpa-e-co@hq.doe.gov</a> ?   | 1        |
| Q4. If I have questions about ARPA-E exchange, who do I contact?  | 1        |
| Q5. Can I speak or meet with the ARPA-E Program Director or other ARPA-E personnel about this funding opportunity announcement?   | 1        |
| Q6. Can a person be PI on one proposal and a Co-PI on a second separate proposal?   | 1        |
| Q7. May applicants submit more than one Concept Paper to this funding opportunity?  | 1        |
| Q8. I have developed a technology that may be a good fit for this funding opportunity. Will ARPA-E please review the attached project information and let me know if I should make a submission to this funding opportunity?  | 2        |
| <b>II. Questions for week ending: June 14, 2013</b>   | <b>2</b> |
| Q9. Dr. ***** at the University of ***** has some questions about the FOA and would like to speak directly with the project manager. Could we have contact information?   | 2        |
| Q10. The FOA indicates (section III.D.1) a cost share requirement of at least 20% for phase II and IIs, as applicable. Are the funding limits listed in section II.A (e.g., \$3,225,000 for I/II/IIs) the maximum government share or the maximum total (including cost share)?   | 2        |
| Q11. Are small business concerns that are majority-owned by multiple venture capital operating companies, hedge funds, and/or private equity firms eligible to apply to this FOA?   | 2        |
| <b>III. Questions for week ending: June 21, 2013</b>  | <b>3</b> |
| Q12.A. We are considering a substrate oriented effort wherein most of the budget would be used to develop a novel substrate manufacturing technology. We are wondering if the statement at the bottom of table 2 in the FOA is a requirement for a substrate centric effort?  | 3        |
| <i>Project must demonstrate device driving a hard switched boost (pfc) converter at <math>f \geq 40</math> khz, <math>v_{out} = 800</math> v, <math>i_{max} = 50</math> a.</i>  | 3        |
| Q12.B. If the answer is yes to Q12.A., then can we put off a boost converter demo until phase IIs?  | 3        |
| Q13. There are few other substrates specifically identified in the ARPA-E solicitation besides "new GaN" on page 16; ".....new GaN, ZnO, SnO2, sapphire, or other wide bandgap substrate growth techniques."  | 3        |
| Given the fact that presently p-type doping in Zinc Oxide (ZnO) is difficult to achieve is this identified substrate intended to be used for GaN epitaxial growth or is ZnO epitaxial growth a viable option?   | 3        |
| <b>IV. Questions for week ending: June 28, 2013</b>   | <b>4</b> |
| Q14. We notice that an example milestone chart in "Technical Milestones and Deliverables instructions and examples" includes a "Technology to Market" task which seems really nice to have it laid out that way but then in the FOA (Section VI.B.6) it seems to suggest that a Tech to Market plan would not be in the proposal itself. Please advise. | 4        |
| Q15. The notice of intent requires indication of percent of effort contributed by lead organization and other members of the team. It doesn't specify phase I, II, or IIS. Or is it for the total project? Please advise.   | 4        |

## QUESTIONS AND ANSWERS

### TABLE OF QUESTIONS

|   |          |
|---|----------|
| Q16.A. Is the period of performance of Phase I, Phase II, and Phase IIS set? (e.g. Phase I is 1 year, Phase II is 2 years, Phase IIS is 1 year)?..... | 4        |
| Q16.B. If Phase I is completed early, can Phase II start early? .....   | 4        |
| Q16.C. If Phase I and Phase II and Phase IIS take 4 years, must we add a 4th year to budget forms SF424 and SF424a? .....                             | 4        |
| <b>V. Questions for week ending: July 5, 2013.....</b>  | <b>5</b> |
| Q17. For the SBIR Phase I/II/IIs program, is the duration for each phase pre-defined, or can the durations be proposed?.....                          | 5        |

## I. FREQUENTLY ASKED QUESTIONS:

### Q1. If I have questions about this funding announcement, who do I contact?

**ANSWER:** Please see the FOA guidance on submitting FOA content questions and response publication. Applicants may submit questions regarding this ARPA-E's Funding Opportunity Announcement (FOA) to [ARPA-E-CO@hq.doe.gov](mailto:ARPA-E-CO@hq.doe.gov). All emails must include the FOA name and number in the subject line. The cover page and Executive Summary of the Funding Opportunity Announcement state the deadlines for submitting questions to [ARPA-E-CO@hq.doe.gov](mailto:ARPA-E-CO@hq.doe.gov).

### Q2. How will I receive a response to questions submitted to [arpa-e-co@hq.doe.gov](mailto:arpa-e-co@hq.doe.gov) about this FOA?

**ANSWER:** Responses are posted in the "Frequently Asked Questions" section of ARPA-E's website. There are general FAQs and a FAQ page for each FOA.

ARPA-E will post responses on a weekly basis to any questions that are received.

ARPA-E will cease to accept questions approximately 5 business days in advance of each submission deadline. Responses to questions received before the cutoff will be posted approximately one business day in advance of the submission deadline. ARPA-E may re-phrase questions or consolidate similar questions for administrative purposes.

### Q3. Will ARPA-E post a response to every question submitted to [arpa-e-co@hq.doe.gov](mailto:arpa-e-co@hq.doe.gov)?

**ANSWER:** No. ARPA-E will only post responses to questions that have not already been addressed by a published FAQ. Also, ARPA-E may consolidate similar questions for administrative purposes.

### Q4. If I have questions about ARPA-E exchange, who do I contact?

**ANSWER:** Applicants may submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to [ExchangeHelp@hq.doe.gov](mailto:ExchangeHelp@hq.doe.gov). All emails must include the name and number of the Funding Opportunity Announcement in the subject line.

### Q5. Can I speak or meet with the ARPA-E Program Director or other ARPA-E personnel about this funding opportunity announcement?

**ANSWER:** No. Upon the issuance of this Funding Opportunity Announcement (FOA), ARPA-E Programs and other ARPA-E personnel are prohibited from communicating (in writing or otherwise) with Applicants, or potential Applicants, regarding the FOA. This "quiet period" remains in effect until ARPA-E's public announcement of its project selections. During the "quiet period," Applicants may submit questions regarding the FOA to [ARPA-E-CO@hq.doe.gov](mailto:ARPA-E-CO@hq.doe.gov) with the FOA name and number in the subject line. Applicants may also submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to [ExchangeHelp@hq.doe.gov](mailto:ExchangeHelp@hq.doe.gov) with the FOA name and number in the subject line. ARPA-E will not accept or respond to communications received by other means (e.g., fax, telephone, mail, hand delivery). Emails sent to other email addresses will be disregarded.

### Q6. Can a person be PI on one proposal and a Co-PI on a second separate proposal?

**ANSWER:** Yes, but the applications must be scientifically distinct from one another.

### Q7. May applicants submit more than one Concept Paper to this funding opportunity?

**ANSWER:** Yes, but each Concept Paper submission must be scientifically distinct.

**Q8. I have developed a technology that may be a good fit for this funding opportunity. Will ARPA-E please review the attached project information and let me know if I should make a submission to this funding opportunity.**

**ANSWER:** No. Applicants must review the Technical Requirements of this funding opportunity to determine if their technology warrants a submission to ARPA-E.

**II. Questions for week ending: JUNE 14, 2013**

**Q9. Dr. \*\*\*\*\* at the University of \*\*\*\*\* has some questions about the FOA and would like to speak directly with the project manager. Could we have contact information?**

**ANSWER:** No, applicants may not speak directly with the program director. For more information, please see the response to Q1 above.

**Q10. The FOA indicates (section III.D.1) a cost share requirement of at least 20% for phase II and IIs, as applicable. Are the funding limits listed in section II.A (e.g., \$3,225,000 for I/II/IIs) the maximum government share or the maximum total (including cost share)?**

**ANSWER:** The funding limits listed in Section II.A of the FOA are the maximum federal share.

**Q11. Are small business concerns that are majority-owned by multiple venture capital operating companies, hedge funds, and/or private equity firms eligible to apply to this FOA?**

**ANSWER:** According to SBA's Guide to SBIR/STTR Eligibility ([http://sbir.gov/sites/default/files/elig\\_size\\_compliance\\_guide.pdf](http://sbir.gov/sites/default/files/elig_size_compliance_guide.pdf)):

"A majority (more than 50%) of your firms' equity (e.g., stock) must be directly owned and controlled by one of the following:

- 1) One or more individuals who are citizens or permanent resident aliens of the US,
- 2) Other for-profit small business concerns (each of which is directly owned and controlled by individuals who are citizens or permanent resident aliens of the US).
- 3) A combination of (1) and (2) above.
- 4) Multiple venture capital operating companies, hedge funds, private equity firms, or any combination of these, so long as no one such firm owns or controls more than 50% of the equity. Note: This option is allowed only for SBIR awards from agencies that are using the authority provided in § 5107 of the SBIR/STTR Reauthorization Act (majority-VC-owned authority), 15 U.S.C. § 638(dd)(1).

\*The venture capital operating company, hedge fund or private equity firm must have a place of business located in the United States and be created or organized in the United States, or under the law of the United States or of any State.”

ARPA-E intends to make some SBIR awards using the authority set forth in item 4) above. Thus, small business concerns that meet the ownership and control requirements identified in item 4) are eligible to apply to this FOA.

### III. Questions for week ending: JUNE 21, 2013

**Q12.A. We are considering a substrate oriented effort wherein most of the budget would be used to develop a novel substrate manufacturing technology. We are wondering if the statement at the bottom of table 2 in the FOA is a requirement for a substrate centric effort?**

*Project must demonstrate device driving a hard switched boost (pfc) converter at  $f \geq 40$  khz,  $v_{out} = 800$  v,  $i_{max} = 50$  a.*

**ANSWER:** Yes.

**Q12.B. If the answer is yes to Q12.A., then can we put off a boost converter demo until phase IIS?**

**ANSWER:** Yes.

**Q13. There are few other substrates specifically identified in the ARPA-E solicitation besides “new GaN” on page 16; “.....new GaN, ZnO, SnO<sub>2</sub>, sapphire, or other wide bandgap substrate growth techniques.”**

**Given the fact that presently p-type doping in Zinc Oxide (ZnO) is difficult to achieve is this identified substrate intended to be used for GaN epitaxial growth or is ZnO epitaxial growth a viable option?**

**ANSWER:** Both approaches are encouraged, but as outlined in the FOA, must be well justified and have a potential to meet or exceed Primary and Secondary Technical Targets.

#### IV. Questions for week ending: JUNE 28, 2013

**Q14. We notice that an example milestone chart in "Technical Milestones and Deliverables instructions and examples" includes a "Technology to Market" task which seems really nice to have it laid out that way but then in the FOA (Section VI.B.6) it seems to suggest that a Tech to Market plan would not be in the proposal itself. Please advise.**

**ANSWER:** A Technology-to-Market plan is not required as part of the Full Application. Applicants must only submit an initial Technology-to-Market plan to ARPA-E if selected for award negotiations. As illustrated in the example milestones chart in the "Technical Milestones and Deliverables – Instructions and Examples," however, Applicants may include preparation of a Technology-to-Market plan as a task in the draft Technical Milestones and Deliverables submitted with the Full Application.

**Q15. The notice of intent requires indication of percent of effort contributed by lead organization and other members of the team. It doesn't specify phase I, II, or IIS. Or is it for the total project? Please advise.**

**ANSWER:** When completing the Notice of Intent and Full Application submissions in ARPA-E eXCHANGE, Applicants should indicate the total percent of effort for the entire project for both the Lead Organization and other Project Team members. If an Applicant is selected for award negotiations, ARPA-E will review the proposed percent of effort by phase for the Lead Organization and other Project Team members by referring to the Budget Justification Workbook/SF-424 submitted with the Applicant's Full Application. In addition, the selected Applicant will be required to complete a SBIR/STTR Funding Agreement Certification form prior to execution of award, in which it certifies that the Project Team meets the percent of effort requirements indicated in Section III.A of the FOA, unless it has been otherwise authorized in writing by the Contracting Officer in response to a written request by the Applicant.

**Q16.A. Is the period of performance of Phase I, Phase II, and Phase IIS set? (e.g. Phase I is 1 year, Phase II is 2 years, Phase IIS is 1 year)?**

**ANSWER:** The maximum period of performance for each phase is up to 1 year for Phase I, up to 2 years for Phase II and up to 1 year for Phase IIS. However, the period of performance for each phase may be shorter than the maximum time allotted for each phase.

**Q16.B. If Phase I is completed early, can Phase II start early?**

**ANSWER:** Yes, if Phase I is completed early, the project team may begin Phase II, subject to approval of the contracting officer to proceed to Phase II.

**Q16.C. If Phase I and Phase II and Phase IIS take 4 years, must we add a 4th year to budget forms SF424 and SF424a?**

**ANSWER:** Applicants need not add a 4th year to the SF-424 or SF-424A. The SF-424 form does not include a section specifying a yearly breakdown of the award budget. In addition, the SF-424A

form for the SWITCHES SBIR/STTR FOA currently reflects a maximum project period of 4 years and includes a specific column for four 12 month budget periods. This SF-424A form is part of the document labeled “Budget Justification Workbook,” which is available on ARPA-E eXCHANGE under “Required Application Documents.” Applicants to the SWITCHES SBIR/STTR FOA should ensure that they use the appropriate application materials available in eXCHANGE for the SWITCHES SBIR/STTR FOA, including the “Budget Justification Workbook.”

V. Questions for week ending: JULY 5, 2013

**Q17. For the SBIR Phase I/II/IIs program, is the duration for each phase pre-defined, or can the durations be proposed?**

**ANSWER:** Applicants may propose periods of performance for each phase up to the maximum time allotted for each phase. For Phase I, Applicants may propose up to 12 months. For Phase II, Applicants may propose up to 24 months. For Phase IIS, Applicants may propose up to 12 months.